10/521086

Rec'd PCT/PTO 13 JAN 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/008207 A1

(51) International Patent Classification[7]: G02B 6/28, 6/125

(21) International Application Number:
PCT/GB2003/003028

(22) International Filing Date: 11 July 2003 (11.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0216319.4 13 July 2002 (13.07.2002) GB

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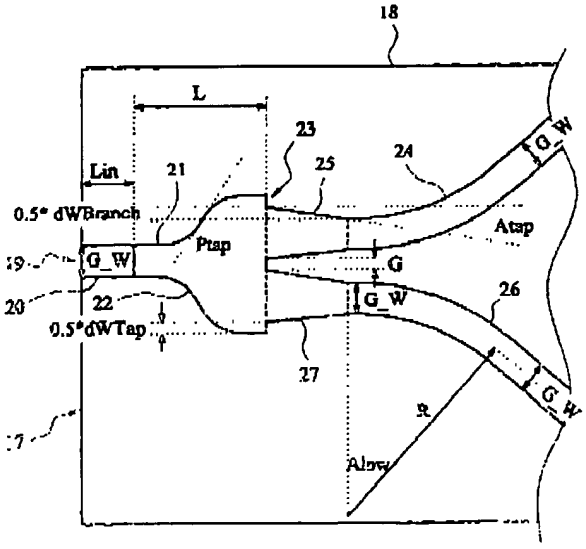
(81) Designated States (*national*): CN, JP, US.

(84) Designated States (*regional*): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVED OPTICAL SPLITTER WITH TAPERD MULTIMODE INTERFERENCE WAVEGUIDE



(57) Abstract: A 1 x 2 splitter design having low loss is described. The splitter has a non-adiabatic tapered waveguide (22) connected between a substantially single-mode input waveguide (20) and two output waveguides (24, 26). The non-adiabatic tapered waveguide widens in width towards the output waveguides, and merges substantially continuously with the input waveguide in a direction parallel to the optical axis of the input waveguide. This keeps radiation mode generation to a minimum which, in turn, keeps insertion loss low. In the described embodiment, the non-adiabatic taper shape is based on a perturbed cosine function. The 1 x 2 splitter can be cascaded with other such splitters in order to build a 1 x 2N splitter design.

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